IFWO

RAW SEQUENCE LISTING
PATENT APPLICATION: **US/10/800,449**

DATE: 09/17/2004
TIME: 09:00:14

Input Set : **N:\Crf3\RULE60\10800449.raw.txt**
Output Set: **N:\CRF4\09172004\J800449.raw**

1 <110> APPLICANT: Sun, Lee-Hwei K
2 Sun, Bill
3 Sun, Cecily R
4 <120> TITLE OF INVENTION: Fc fusion proteins of human granulocyte colony-stimulaing factor with
5 increased biological activities
6 <130> FILE REFERENCE: 03SUN2001
7 <140> CURRENT APPLICATION NUMBER: US/10/800,449
C--> 8 **<141> CURRENT FILING DATE: 2004-03-15**
9 <150> PRIOR APPLICATION NUMBER: US/09/968,362
10 <151> PRIOR FILING DATE: 2001-10-01
12 <160> NUMBER OF SEQ ID NOS: 28
13 <170> SOFTWARE: PatentIn version 3.1
15 <210> SEQ ID NO: 1
16 <211> LENGTH: 30
17 <212> TYPE: DNA
18 <213> ORGANISM: Artificial Sequence
19 <220> FEATURE:
20 <223> OTHER INFORMATION: PCR primer
21 <400> SEQUENCE: 1
22 cccaagcttc ccagacccat ggctggacct 30
24 <210> SEQ ID NO: 2
25 <211> LENGTH: 27
26 <212> TYPE: DNA
27 <213> ORGANISM: Artificial sequence
28 <220> FEATURE:
29 <223> OTHER INFORMATION: PCR primer
30 <400> SEQUENCE: 2
31 cggatccggg ctgggcaagg tggcgta 27
33 <210> SEQ ID NO: 3
34 <211> LENGTH: 20
35 <212> TYPE: DNA
36 <213> ORGANISM: Artificial Sequence
37 <220> FEATURE:
38 <223> OTHER INFORMATION: PCR primer
39 <400> SEQUENCE: 3
40 gagcgcaaat gttgtgtcga 20
42 <210> SEQ ID NO: 4
43 <211> LENGTH: 28
44 <212> TYPE: DNA
45 <213> ORGANISM: Artificial Sequence
46 <220> FEATURE:
47 <223> OTHER INFORMATION: PCR primer
48 <400> SEQUENCE: 4

RAW SEQUENCE LISTING DATE: 09/17/2004
PATENT APPLICATION: **US/10/800,449** TIME: 09:00:14

Input Set : **N:\Crf3\RULE60\10800449.raw.txt**
Output Set: **N:\CRF4\09172004\J800449.raw**

ggaattctca tttacccgga gacaggga 28

<210> SEQ ID NO: 5
<211> LENGTH: 29
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: PCR primer
<400> SEQUENCE: 5
tggttttctc gatggaggct gggaggcct 29

<210> SEQ ID NO: 6
<211> LENGTH: 29
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: PCR primer
<400> SEQUENCE: 6
aggcctccca gcctccatcg agaaaacca 29

<210> SEQ ID NO: 7
<211> LENGTH: 69
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: PCR primer
<400> SEQUENCE: 7
cggatccggt ggcggttccg gtggaggcgg aagcggcggt ggaggatcag agcgcaaatg 60
ttgtgtcga 69

<210> SEQ ID NO: 8
<211> LENGTH: 21
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: PCR primer
<400> SEQUENCE: 8
gagtccaaat atggtccccc a 21

<210> SEQ ID NO: 9
<211> LENGTH: 28
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: PCR primer
<400> SEQUENCE: 9
ggaattctca tttacccaga gacaggga 28

<210> SEQ ID NO: 10
<211> LENGTH: 21
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: PCR primer
<400> SEQUENCE: 10

RAW SEQUENCE LISTING DATE: 09/17/2004
PATENT APPLICATION: **US/10/800,449** TIME: 09:00:14

Input Set : **N:\Crf3\RULE60\10800449.raw.txt**
Output Set: **N:\CRF4\09172004\J800449.raw**

104 cctgagttcg cgggggggacc a 21
106 <210> SEQ ID NO: 11
107 <211> LENGTH: 60
108 <212> TYPE: DNA
109 <213> ORGANISM: Artificial Sequence
110 <220> FEATURE:
111 <223> OTHER INFORMATION: PCR primer
112 <400> SEQUENCE: 11
113 gagtccaaat atggtccccc atgcccacca tgcccagcac ctgagttcgc gggggggacca 60
115 <210> SEQ ID NO: 12
116 <211> LENGTH: 70
117 <212> TYPE: DNA
118 <213> ORGANISM: Artificial Sequence
119 <220> FEATURE:
120 <223> OTHER INFORMATION: PCR primer
121 <400> SEQUENCE: 12
122 cggatccggt ggcggttccg gtggaggcgg aagcggcggt ggaggatcag agtccaaata 60
123 tggtccccca 70
125 <210> SEQ ID NO: 13
126 <211> LENGTH: 21
127 <212> TYPE: DNA
128 <213> ORGANISM: Artificial Sequence
129 <220> FEATURE:
130 <223> OTHER INFORMATION: PCR primer
131 <400> SEQUENCE: 13
132 gacaaaactc acacatgccc a 21
134 <210> SEQ ID NO: 14
135 <211> LENGTH: 23
136 <212> TYPE: DNA
137 <213> ORGANISM: Artificial Sequence
138 <220> FEATURE:
139 <223> OTHER INFORMATION: PCR primer
140 <400> SEQUENCE: 14
141 acctgaagtc gcgggggggac cgt 23
143 <210> SEQ ID NO: 15
144 <211> LENGTH: 55
145 <212> TYPE: DNA
146 <213> ORGANISM: Artificial Sequence
147 <220> FEATURE:
148 <223> OTHER INFORMATION: PCR primer
149 <400> SEQUENCE: 15
150 gacaaaactc acacatgccc accgtgccca gcacctgaag tcgcgggggg accgt 55
152 <210> SEQ ID NO: 16
153 <211> LENGTH: 70
154 <212> TYPE: DNA
155 <213> ORGANISM: Artificial Sequence
156 <220> FEATURE:
157 <223> OTHER INFORMATION: PCR primer
158 <400> SEQUENCE: 16

RAW SEQUENCE LISTING DATE: 09/17/2004
PATENT APPLICATION: **US/10/800,449** TIME: 09:00:14

Input Set : **N:\Crf3\RULE60\10800449.raw.txt**
Output Set: **N:\CRF4\09172004\J800449.raw**

cggatccggt ggcggttccg gtggaggcgg aagcggcggt ggaggatcag acaaaactca 60
cacatgccca 70

<210> SEQ ID NO: 17
<211> LENGTH: 1368
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: hG-CSF-L-vFc gamma2 (Figure 2A)
<400> SEQUENCE: 17

aagcttccca gacccatggc tggacctgcc acccagagcc ccatgaagct gatggccctg 60
cagctgctgc tgtggcacag tgcactctgg acagtgcagg aagccacccc cctgggccct 120
gccagctccc tgccccagag cttcctgctc aagtgcttag agcaagtgag gaagatccag 180
ggcgatggcg cagcgctcca ggagaagctg tgtgccacct acaagctgtg ccaccccgag 240
gagctggtgc tgctcggaca ctctctgggc atcccctggg ctcccctgag cagctgcccc 300
agccaggccc tgcagctggc aggctgcttg agccaactcc atagcggcct tttcctctac 360
caggggctcc tgcaggccct ggaagggatc tccccgagt tgggtcccac cttggacaca 420
ctgcagctgg acgtcgccga ctttgccacc accatctggc agcagatgga agaactggga 480
atggcccctg ccctgcagcc cacccagggt gccatgccgg ccttcgcctc tgctttccag 540
cgccgggcag gaggggtcct agttgcctcc catctgcaga gcttcctgga ggtgtcgtac 600
cgcgttctac gccaccttgc ccagcccgga tccggtggcg gttccggtgg aggcggaagc 660
ggcggtggag gatcagagcg caaatgttgt gtcgagtgcc caccgtgccc agcaccacct 720
gtggcaggac cgtcagtctt cctcttcccc ccaaaaccca aggacaccct catgatctcc 780
cggacccctg aggtcacgtg cgtggtggtg gacgtgagcc acgaagaccc cgaggtccag 840
ttcaactggt acgtggacgg cgtggaggtg cataatgcca agacaaagcc acgggaggag 900
cagttcaaca gcacgttccg tgtggtcagc gtcctcaccg ttgtgcacca ggactggctg 960
aacggcaagg agtacaagtg caaggtctcc aacaaaggcc tcccagcctc catcgagaaa 1020
accatctcca aaaccaaagg gcagccccga gaaccacagg tgtacaccct gccccatcc 1080
cgggaggaga tgaccaagaa ccaggtcagc ctgacctgcc tggtcaaagg cttctacccc 1140
agcgacatcg ccgtggagtg ggagagcaat gggcagccgg agaacaacta caagaccaca 1200
cctcccatgc tggactccga cggctccttc ttcctctaca gcaagctcac cgtggacaag 1260
agcaggtggc agcaggggaa cgtcttctca tgctccgtga tgcatgaggc tctgcacaac 1320
cactacacgc agaagagcct ctccctgtct ccgggtaaat gagaattc 1368

<210> SEQ ID NO: 18
<211> LENGTH: 448
<212> TYPE: PRT
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: hG-CSF-L-vFc gamma2 with a 30-amino acid leader peptide (Figure 2A)
<400> SEQUENCE: 18

Met Ala Gly Pro Ala Thr Gln Ser Pro Met Lys Leu Met Ala Leu Gln
1 5 10 15
Leu Leu Leu Trp His Ser Ala Leu Trp Thr Val Gln Glu Ala Thr Pro
20 25 30
Leu Gly Pro Ala Ser Ser Leu Pro Gln Ser Phe Leu Leu Lys Cys Leu
35 40 45
Glu Gln Val Arg Lys Ile Gln Gly Asp Gly Ala Ala Leu Gln Glu Lys
50 55 60
Leu Cys Ala Thr Tyr Lys Leu Cys His Pro Glu Glu Leu Val Leu Leu

RAW SEQUENCE LISTING
PATENT APPLICATION: US/10/800,449

DATE: 09/17/2004
TIME: 09:00:14

Input Set : N:\Crf3\RULE60\10800449.raw.txt
Output Set: N:\CRF4\09172004\J800449.raw

```
210       65                  70                  75                  80
211       Gly His Ser Leu Gly Ile Pro Trp Ala Pro Leu Ser Ser Cys Pro Ser
212                   85                  90                  95
213       Gln Ala Leu Gln Leu Ala Gly Cys Leu Ser Gln Leu His Ser Gly Leu
214                  100                 105                 110
215       Phe Leu Tyr Gln Gly Leu Leu Gln Ala Leu Glu Gly Ile Ser Pro Glu
216              115                 120                 125
217       Leu Gly Pro Thr Leu Asp Thr Leu Gln Leu Asp Val Ala Asp Phe Ala
218          130                 135                 140
219       Thr Thr Ile Trp Gln Gln Met Glu Glu Leu Gly Met Ala Pro Ala Leu
220       145                 150                 155                 160
221       Gln Pro Thr Gln Gly Ala Met Pro Ala Phe Ala Ser Ala Phe Gln Arg
222                   165                 170                 175
223       Arg Ala Gly Gly Val Leu Val Ala Ser His Leu Gln Ser Phe Leu Glu
224                  180                 185                 190
225       Val Ser Tyr Arg Val Leu Arg His Leu Ala Gln Pro Gly Ser Gly Gly
226              195                 200                 205
227       Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Glu Arg Lys Cys
228          210                 215                 220
229       Cys Val Glu Cys Pro Pro Cys Pro Ala Pro Pro Val Ala Gly Pro Ser
230       225                 230                 235                 240
231       Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Met Ile Ser Arg
232                   245                 250                 255
233       Thr Pro Glu Val Thr Cys Val Val Val Asp Val Ser His Glu Asp Pro
234                  260                 265                 270
235       Glu Val Gln Phe Asn Trp Tyr Val Asp Gly Val Glu Val His Asn Ala
236              275                 280                 285
237       Lys Thr Lys Pro Arg Glu Glu Gln Phe Asn Ser Thr Phe Arg Val Val
238          290                 295                 300
239       Ser Val Leu Thr Val Val His Gln Asp Trp Leu Asn Gly Lys Glu Tyr
240       305                 310                 315                 320
241       Lys Cys Lys Val Ser Asn Lys Gly Leu Pro Ala Ser Ile Glu Lys Thr
242                   325                 330                 335
243       Ile Ser Lys Thr Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu
244                  340                 345                 350
245       Pro Pro Ser Arg Glu Glu Met Thr Lys Asn Gln Val Ser Leu Thr Cys
246              355                 360                 365
247       Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp Glu Ser
248          370                 375                 380
249       Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro Met Leu Asp
250       385                 390                 395                 400
251       Ser Asp Gly Ser Phe Phe Leu Tyr Ser Lys Leu Thr Val Asp Lys Ser
252                   405                 410                 415
253       Arg Trp Gln Gln Gly Asn Val Phe Ser Cys Ser Val Met His Glu Ala
254                  420                 425                 430
255       Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser Leu Ser Pro Gly Lys
256              435                 440                 445
258 <210> SEQ ID NO: 19
259 <211> LENGTH: 1371
```

RAW SEQUENCE LISTING ERROR SUMMARY DATE: 09/17/2004
PATENT APPLICATION: **US/10/800,449** TIME: 09:00:15

Input Set : **N:\Crf3\RULE60\10800449.raw.txt**
Output Set: **N:\CRF4\09172004\J800449.raw**

Invalid Line Length:
The rules require that a line not exceed 72 characters in length. This includes spaces.

Seq#:1; Line(s) 4
Seq#:18; Line(s) 198
Seq#:20; Line(s) 294
Seq#:22; Line(s) 391

VERIFICATION SUMMARY
PATENT APPLICATION: **US/10/800,449**

DATE: 09/17/2004
TIME: 09:00:15

Input Set : **N:\Crf3\RULE60\10800449.raw.txt**
Output Set: **N:\CRF4\09172004\J800449.raw**

L:8 M:271 C: Current Filing Date differs, Replaced Current Filing Date